



HIGHWAY-RAIL GRADE CROSSING **STATE ACTION PLAN**

North Dakota Department of Transportation
Planning & Asset Management Division
Planning & Rail Section

Effective Date: February 11, 2022



HIGHWAY-RAIL GRADE CROSSING
STATE ACTION PLAN

TRANSPORTATION CONNECTION

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Highway-Rail Grade Crossing **STATE ACTION PLAN**

Introduction

The Federal Railroad Administration (FRA) issued a final rule in response to the Fixing America's Surface Transportation Act (FAST Act) requiring 40 States and the District of Columbia to develop and implement highway-rail grade crossing action plans. This final rule is effective 13 January 2021.

This final rule revises FRA's regulation (49 CFR 234.11) on State Highway-Rail Grade Crossing Action Plans (Action Plans) to require 40 States and the District of Columbia (DC) to develop and implement FRA-approved Action Plans. The final rule further provided these Action Plans identify specific solutions for improving safety at crossings, including highway-rail grade crossing closures or grade separations, and must focus on crossings that have experienced multiple collisions, or are at high risk for such collisions.

The North Dakota Department of Transportation (NDDOT) Planning/Rail Section has developed this Action Plan to conform with the revised requirements of 49 CFR Part 234.11, Subpart B.

Scope and Objective

In accordance with 49 CFR 234.11, an Action Plan, hereinafter referred to as the Plan, requires an analysis of five-years of highway-rail and pathway grade crossing crash data to evaluate safety improvement needs. The Plan emphasizes road user safety at highway-rail grade crossings and will be effective for a five (5) year period when approved.

NDDOT uses funding from the Highway Safety Improvement Program provided by the Federal Highway Administration (FHWA) to make safety enhancements to highway-rail grade crossings per the 23 USC § 130. This funding is referred to in the Plan as the Section 130 Program and is limited to use at public highway-rail grade crossings. Although NDDOT's highway-rail crossing funding source can only impact public crossings, all crossing types are included in this plan per the CFR requirements. North Dakota Century Code (N.D.C.C.) 49-11-00.1 deems a crossing "public" if a public authority maintains the roadway, including associated sidewalks or pathways, on both sides of the crossing. References to a "crossing" or "crossings" refer only to public highway-rail grade crossings, as defined in N.D.C.C., unless otherwise indicated.

The Section 130 Program is 100% federally funded per Infrastructure Investment and Job Act (IIJA). This program is designed to provide enhanced safety measures, new signalization, signal upgrades on antiquated equipment, crossing relocation and surface rehabilitation or panel extension at between 35 - 45 highway-rail grade crossings across

North Dakota annually. North Dakota is allocated \$5.22 million dollars each year. These federal funds are obligated for eligible highway-rail grade crossing improvement projects

Highway-rail crossing warning devices are classified in two categories, passive or active. Passive warning devices typically consist of crossbucks, warning signs, regulatory signs, and pavement markings. Passive crossings refer to crossings without active warning devices. Active warning devices typically consist of automatic gates, and/or flashing lights and bells. Hereinafter references to “gates” or “gated crossing” refer to crossings equipped with automatic gates, flashing lights and bells.

The objective of the Plan is to identify specific solutions to mitigate crashes between trains or on-track equipment, pedestrians, and/or vehicles at crossings. Crash is a widely used term within the traffic engineering field and refers to collisions, accidents, or wrecks. The term crash hereinafter should be understood to refer to such occurrences.

The Plan focuses on existing at-grade crossings with crash history or other risk factors that could cause multiple crashes at the crossing. The Rail Safety Improvement Act of 2008 recognized that multiple crash crossings account for a disproportionately high number of total crashes and offer the greatest opportunity for crash reduction. Multiple crash crossings are defined as any crossing that has experienced more than one crash during the Plan’s timeframe (2016 – 2020). During this timeframe, there was one crossing in the state that meets the definition of a multiple crash crossing. As you can see from the table below, there has also been a trending decline in highway-rail crossing crashes in North Dakota.

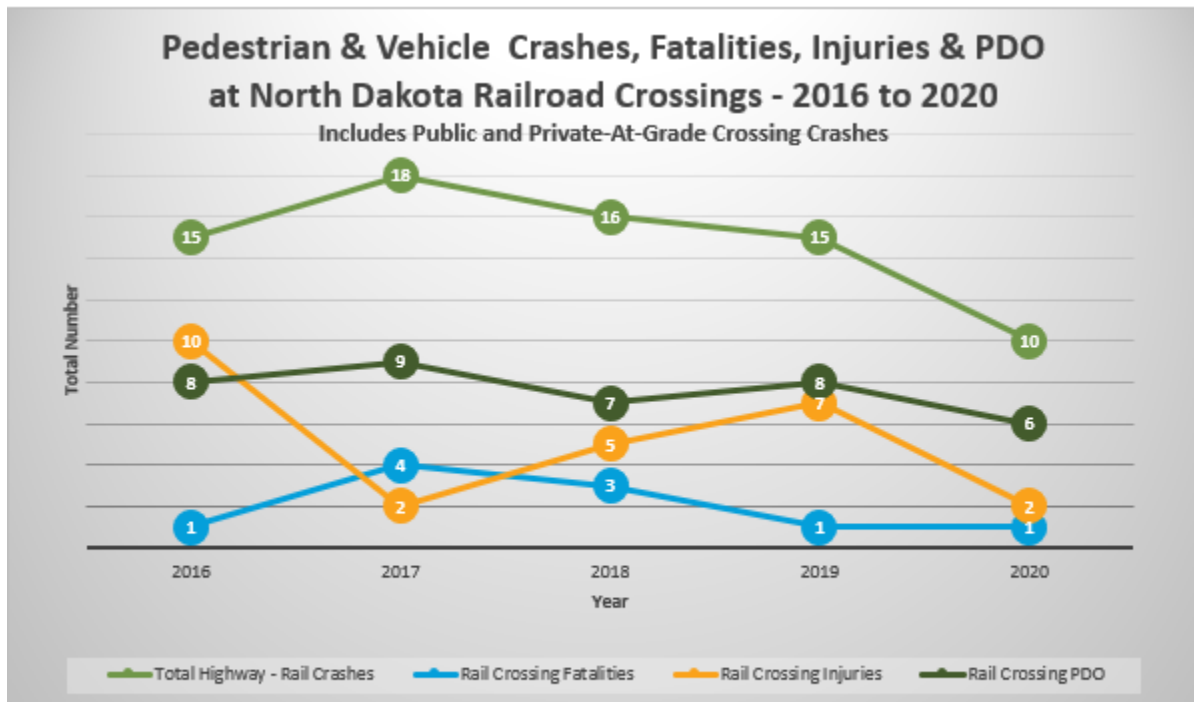
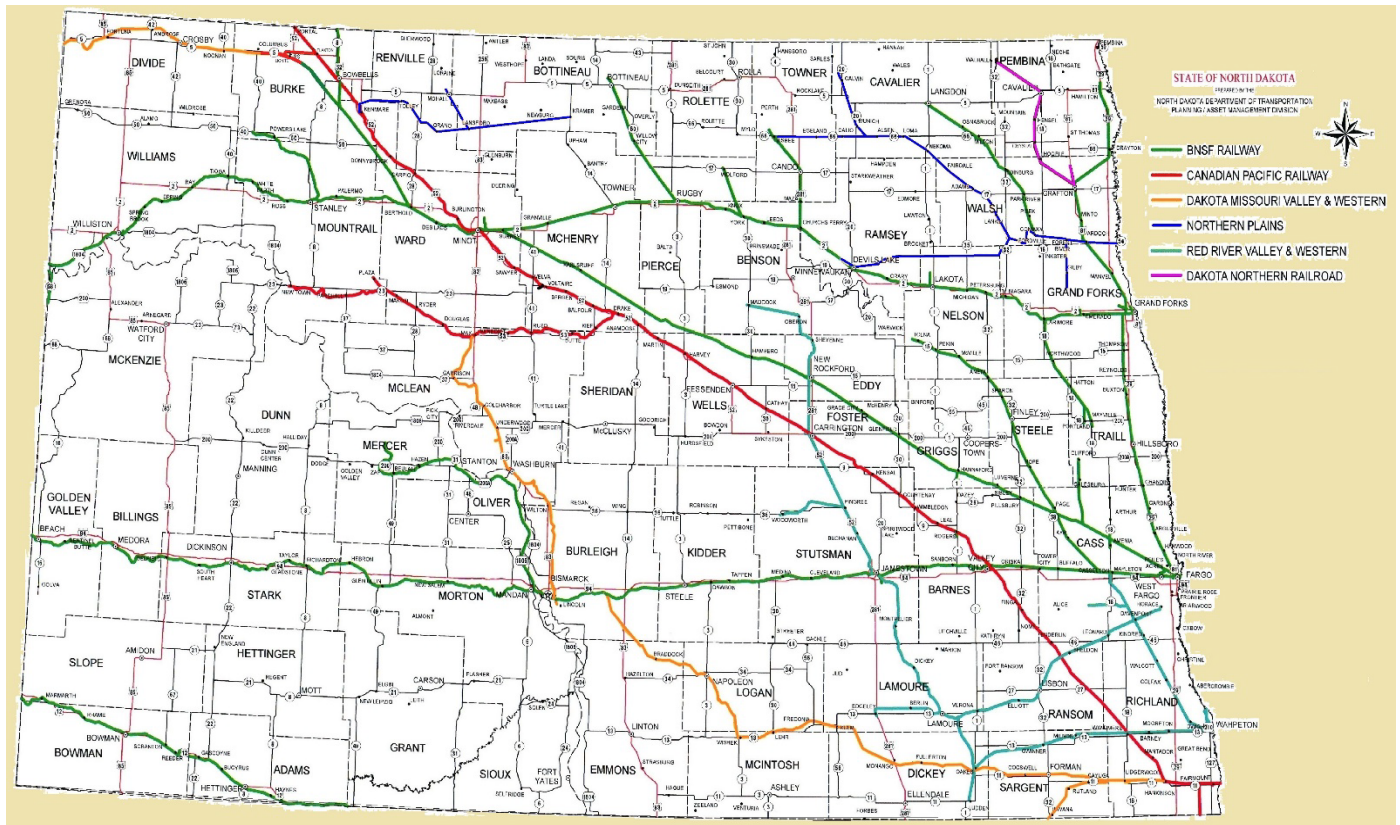


Figure 1 SOURCE:

<https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/ConsolidatedHwyRailIncidentsSQL.aspx>

Note: 55a Reports from confirmed suicides/attempted suicides are removed by rule.

North Dakota Rail System



Historically, railroad operations in North Dakota were oriented to the movement of goods between geographical population and industrial centers, such as Midwest agricultural markets, coastal export facilities, and southern and Gulf Coast refineries. Through the years, these routes were integrated into a comprehensive national rail network. This has worked to North Dakota’s advantage as new industries seek transportation efficiency. Case in point, the emergence of an intermodal facility in Minot, ND. This facility enables goods to be loaded into containers and transported directly to coastal ports without first having to be trucked to a Minneapolis, MN intermodal facility for loading.

The map above depicts the statewide rail network as of 2020. According to the most recent State Rankings Report by the Association of American Railroads (AAR), total miles of railroad operated in the state is 3,223 miles. As defined by the AAR, “miles of [rail]road” is the aggregate length of railway, excluding yard tracks and sidings, and does not reflect the fact that a mile of rail may include two, three, or more parallel tracks. Miles of rail operated, less trackage rights, which eliminates double counting caused by more than one railroad operating the same track, is the measure of the rail network. The amount of railroad mileage operated in North Dakota, by classification, including and excluding trackage rights is shown in the following table.

Miles Operated in North Dakota in 2020

Class of Railroad	Number of Freight Railroads	Miles Operated Excluding Trackage Rights	Miles Operated Including Trackage Rights
Class I	2	2,053	2,162
Regional	2	866	967
Short Line	2	352	352
Total	6	3,271	3,481

Source: North Dakota Public Service Commission.

I. Highway-Rail Crossing Safety Partners & Stakeholders

NDDOT's primary rail safety partnership is with Operation Lifesaver of the Dakotas through the North Dakota Safety Council (NDSC). The Operation Lifesaver of the Dakotas State Coordinator, a representative from NDSC, chairs the committee, comprised of a variety of representatives, including federal, State and local government agencies, highway safety organizations, law enforcement, and operating railroads in North and South Dakota and their suppliers. Committee members include representatives from:

- FRA
- NDDOT
- South Dakota Department of Transportation
- North Dakota Public Service Commission (PSC)
- North Dakota Highway Patrol
- NDSC
- Moorhead, MN Police Department
- BNSF Railway
- BNSF Police
- Canadian Pacific Railway (CP)
- CP Police
- Dakota, Missouri Valley & Western Railroad (DMVW)
- Northern Plains Railroad (NPR)
- Red River Valley & Western Railroad (RRVW)
- WATCO

The Operation Lifesaver of the Dakotas program supports three critical principals:

Education: Operation Lifesaver strives to provide education to people of all ages about the hazards at highway-rail crossings. Methods used to reach the public include civic presentations, early elementary and driver education curriculum activities, school bus driver training, industrial safety, law enforcement training, and media coverage.

Enforcement: Along with education, enforcement is necessary to provide rules and regulations to motorist and pedestrian as to the rights and responsibilities at highway-rail crossings.

Engineering: Highway-rail crossings must be kept as physically and

operationally as safe as possible, with improvements made where needed. The public should be educated about federal, state and railroad programs that plan, install and maintain grade crossings.

Operation Lifesaver of the Dakotas and its partners conduct annual public information campaigns and, “Rail Safety Blitzes”, in designated areas. Locations and dates are identified to meet increased heavy truck traffic and tourist activity. A spring Blitz is held in the western portion of the state as oil production and truck traffic increase and a fall Blitz is held in the eastern portion of the state as the annual crop harvest brings increased traffic and out-of-state labor.

When North Dakotans encounter a hazard at a highway-rail grade crossing, or a blocked crossing, they are encouraged to call the number on the Emergency Notification System (ENS) sign and inform the railroad company dispatcher of the issue and crossing identifier depicted on the sign. Additionally, the public is encouraged to log the blocked crossing utilizing the FRA Blocked Crossing Incident Reporter. If a highway-rail grade crossing is consistently blocked, they are also encouraged to contact the North Dakota Public Service Commission to report the situation.

Additionally, NDDOT involves other internal and statewide safety partners/stakeholders through annual highway-rail crossing safety solicitation letters to identify public highway-rail crossing concerns. These concerns are solicited from:

- North Dakota’s three Metropolitan Planning Organizations
- City Engineers from ND’s 12 major cities: Williston, Dickinson, Minot, Mandan, Bismarck, Devils Lake, Jamestown, Valley City, Grand Forks, West Fargo, Fargo, and Wahpeton.
- North Dakota League of Cities
- North Dakota Association of Counties
- North Dakota Township Officers’ Association
- North Dakota Public School Districts
- Five federally recognized Tribal Nations and Indian community within North Dakota: the Sisseton-Wahpeton Oyate Nation; the Mandan, Hidatsa & Arikara Nation (Three Affiliated Tribes); the Spirit Lake Nation; the Standing Rock Sioux Tribe; the Turtle Mountain Band of Chippewa Indians, and the Trenton Indian Service Area.
- Operation Lifesaver of the Dakotas
- NDDOT District Engineers
- Operating Railroads within North Dakota; and
- North Dakota Highway Patrol.

Finally, the PSC hosts a Rail Safety and Stakeholders Roundtable Discussion annually, of which NDDOT is an active participant. This forum offers an opportunity for stakeholders from the transportation, agriculture, community, law enforcement, and first responder agencies and entities to discuss issues or concerns with representatives from each of North Dakota’s operating railroads. It also allows these entities to establish direct contact with each railroad to resolve local rail-related concerns and issues.

II. Public At-Grade Crossing Crashes

Despite having 3,294 public and 1,090 private at-grade crossings in North Dakota¹, the amount of vehicle/train crashes annually remains low. Multiple crashes at highway-rail grade crossings rarely occur in North Dakota for a few apparent reasons. First, it has been identified that a portion of these collisions are caused by driver behavior, consisting of items and actions within the vehicle that distract the driver (i.e., cell phones, radio, passengers.) A second reason is the complacent driver. This driver travels over the same crossing regularly with intense focus on the destination. The complacent driver becomes unaware of actual dangers of the potential of an approaching train from either direction because they rarely encounter a train at that crossing. Neither driver age nor impaired drivers seem to be contributors to highway-rail crossing crashes.

When there is a highway-rail grade crossing crash, regardless of the severity, efforts are made to determine the root cause(s). First, an assessment is conducted by first reviewing the crash report, which often identifies why the highway-rail grade crossing crash occurred. Second, a field investigation may be scheduled to identify whether a predominant correctable characteristic exists. A diagnostic team comprised of the NDDOT, the rail operator, and the local public agency (LPA), also known as road authority, is assembled and meets during the field investigation to discuss, collaborate, and reach consensus on appropriate countermeasures to implement at the crossing. Once implemented, those countermeasures enhance the safety and proactively prevent future similar crashes, ideally reducing the number of overall crashes in the state.

Existing strategies in place to reduce the number of crashes include:

1. Identify the 25 top ranked passive crossings from the FRA Web Accident Prediction System (FRA Predictor) that have not previously been identified.
2. Solicit input from LPAs, tribal nations, and railroad operators for rail safety concerns within their jurisdictions.
3. Encourage local public agencies to implement educational and enforcement policies, while partnering with their local operating railroad(s) on safety concerns.

Although multiple crossing crashes are infrequent in North Dakota, the NDDOT continues to identify the location and frequency of all highway-rail crashes and incidents to reduce them. While no measure is infallible, implementing a strategy to reduce the number of incidents is the first step to resolving future issues.

NDDOT's methodology for identifying deficient crossings starts with the FRA Predictor. The FRA Predictor uses several variables to rank each specific crossing. These factors include:

- 5-year crash history,
- Train volumes and speeds per day,

¹ As found on FRA's website <https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/invtab.aspx> and set for North Dakota to generate a report of at-grade crossings.

- Total number of tracks,
- Annual Average Daily Traffic (vehicles),
- Type of warning device,
- Total roadway lanes, and
- Roadway surface type (paved or unpaved).

The NDDOT Protective Devices Calculator, created by the Planning/Rail Section shown in Appendix C, provides the following additional risk factors for consideration:

- type of roadway users,
- proximity to schools,
- surrounding area population density,
- crossing geometrics, and
- approach characteristics.

All these factors are critical in determining a strategy to reduce potential high-risk public-at-grade crossings and identify crossing risk values. Crossings are monitored annually after the installation of the identified safety countermeasure(s).

If the proposed countermeasures fail to produce the desired outcome at the grade crossing, other alternatives will be considered by the diagnostic team. Follow up action may require installation of active warning devices at the grade crossing.

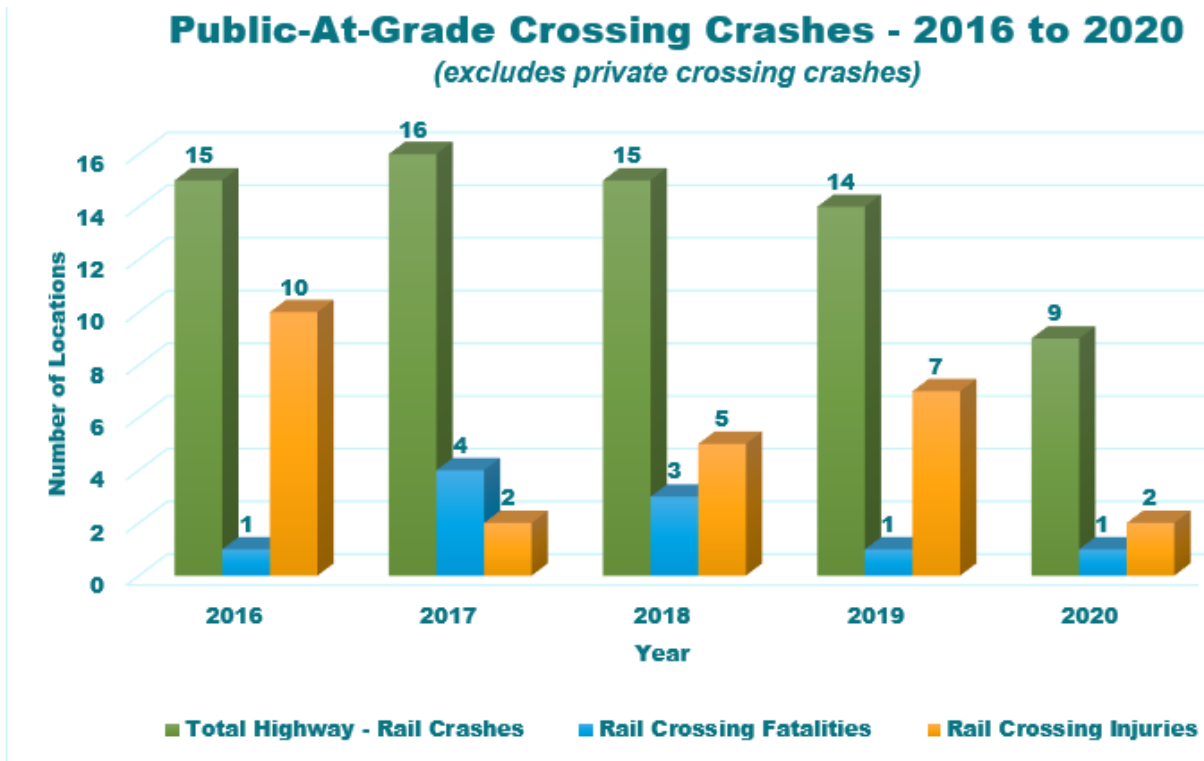


Figure 1 SOURCE:

<https://safetydata.fra.dot.gov/OfficeofSafety/publicsite/Query/ConsolidatedHwyRailIncidentsSQL.aspx>

Note: 55a Reports from confirmed suicides/attempted suicides are removed by rule.

Recent Crashes at Crossings

The following table shows all crashes statewide for all railroads in the past 3 years (2018-2020).

	Crossing ID	County/City	Total Crashes	Fatal Crashes	Total Fatalities	Injury Crashes	Total Injuries
1	093505M	EDDY/NEW ROCKFORD	1	1	1	.	.
2	093315J	MOUNTRAIL/ROSS	1	1	1	.	.
3	086867G	TRAILL/BUXTON	1	1	1	.	.
4	698955H	WARD/FOXHOLM	1	1	1	.	.
5	093373E	WILLIAMS/EPPING	1	1	1	.	.
6	093347P	WILLIAMS/TIOGA	1	1	1.	.	.
7	690357S	RICHLAND/LIDGERWOOD	1	.	.	1	3
8	394028D	BOWMAN/GASCOYNE	1	.	.	1	2
9	071180U	BARNES/VALLEY CITY	1	.	.	1	1
10	071089B	CASS/MAPLETON	1	.	.	1	1
11	103428V	DICKEY/OAKES	1	.	.	1	1
12	698719D	FOSTER/LEMERT	1	.	.	1	1
13	081329H	GRAND FORKS/GRAND FORKS	1	.	.	1	1
14	086877M	GRAND FORKS/LARIMORE	1	.	.	1	1
15	693360K	MOUNTRAIL/NEW TOWN	1	.	.	1	1
16	093329S	MOUNTRAIL/WHITE EARTH	1	.	.	1	1
17	087791G	STUTSMAN/CLEVELAND	1	.	.	1	1
18	691919N	BARNES/VALLEY CITY	1	.	.	.	.
19	093485D	BENSON/YORK	1	.	.	.	.
20	087674L	BURLEIGH/BISMARCK	1	.	.	.	.
21	087739C	BURLEIGH/MOFFIT	1	.	.	.	.
22	071100Y	CASS/CASSELTON	1	.	.	.	.
23	070809N	CASS/FARGO	1	.	.	.	.
24	070832H	CASS/FARGO	1	.	.	.	.
25	093035G	CASS/PAGE	1	.	.	.	.
26	093442K	EDDY/NEW ROCKFORD	1	.	.	.	.
27	093445F	EDDY/NEW ROCKFORD	1	.	.	.	.
28	086772Y	GRAND FORKS/EMERADO (private)	1	.	.	.	.
29	062508X	GRAND FORKS/GRAND FORKS	1	.	.	.	.
30	081290G	GRAND FORKS/GRAND FORKS	1	.	.	.	.
31	945750W	GRAND FORKS/GRAND FORKS (private)	1	.	.	.	.
32	086844A	GRAND FORKS/THOMPSON	1	.	.	.	.
33	087527Y	MORTON/HEBRON	1	.	.	.	.
34	093313V	MOUNTRAIL/ROSS	1	.	.	.	.
35	093326W	MOUNTRAIL/WHITE EARTH	1	.	.	.	.
36	086658Y	RAMSEY/CRARY	1	.	.	.	.
37	691790N	RICHLAND/FAIRMOUNT	1	.	.	.	.
38	062545A	WALSH/MINTO (private)	1	.	.	.	.
39	698933H	WARD/MINOT	1	.	.	.	.
40	698914D	WARD/MINOT	1	.	.	.	.
41	698755Y	WELLS/FESSENDEN	1	.	.	.	.
			41	6	6	11	14

Crossings with Multiple Crashes

In the past five years (2016-2020), there was only one highway-rail grade crossing with more than one crash in North Dakota. The crossing experienced two crashes (one in 2017 and another in 2018) and was equipped with flashing lights and gates during both crashes.

III. Grade Crossing Separations

Grade crossing separations can be a feasible alternative to resolve a high frequency crash problem at grade crossings.

Separations are normally considered during planning and preliminary engineering phases of roadway construction or maintenance. Grade separations are included in the construction phase of major contracts when there is a positive benefit cost ratio. These structures cost more than the full annual funding made available and require environmental analysis, acquisition of right-of-way, along with additional Federal requirements to qualify for the Section 130 Program funding.

Grade separations are always reviewed as an alternative to eliminate a safety issue but are seldom used because many do not meet federal guidance for consideration² or fail to create a positive benefit-cost analysis.

IV. Crossing Closures

Permanent at-grade public crossing closures is a consideration during field investigation diagnostics, planning, and preliminary engineering of roadway project phases. Grade crossing closures may offer a reasonable alternative resolution for a high frequency crash problem at low volume, low speed grade crossings.

While NDDOT does not pursue crossing closures on its own, NDDOT will work with the operating railroad to close any crossing approved for closure by a LPA. NDDOT will procure Section 130 Program funds to be used as an incentive payment to the LPA for the permanent closure of a crossing. NDDOT will match the incentive payment for the grade crossing closure paid by the railroad up to the maximum allowed by the federal regulations for Section 130 Program. The LPA receiving an incentive payment from the State must identify transportation safety improvements within their jurisdiction to be completed within 18 months from receipt of funding, as verified by the NDDOT Planning/Rail Section. The following are summaries of crossing closures from 2016 – 2020 by the two Class I railroads operating in North Dakota.

² [Highway-Rail Crossing Handbook - Third Edition - Safety | Federal Highway Administration \(dot.gov\)](#)

Summary of BNSF Crossings Closed in North Dakota 2016-2020

Crossing Type	Crossing Purpose	Crossing Position	Number Closed
Public	Highway-Rail Crossing	At-Grade	112
Private	Highway-Rail Crossing	At-Grade	110
Public	Highway-Rail Crossing	Grade-Separated	7
Private	Highway-Rail Crossing	Grade-Separated	6
BLANK	Pedestrian Pathway Crossing	At-Grade	5
BLANK	Pedestrian Pathway Crossing	Grade-Separated	1
Private	BLANK	At-Grade	7
Public	BLANK	At-Grade	1
Total At-Grade			235
Total All Closed			249

Source: FRA SafetyData, Inventory data as reported to FRA by States and railroads

Summary of SOO* Crossings Closed in North Dakota 2016-2020

Crossing Type	Crossing Purpose	Crossing Position	Number Closed
Private	Highway-Rail Crossing	At-Grade	106
Public	Highway-Rail Crossing	At-Grade	59
Private	Pedestrian Pathway Crossing	At-Grade	1
Public	Highway-Rail Crossing	Grade-Separated	1
Total At-Grade			166
Total All Closed			167

Source: FRA SafetyData, Inventory data as reported to FRA by States and railroads

*CP Operates in the USA as SOO

V. High Speed Rail Corridors

NDDOT is not currently pursuing high speed rail corridors. NDDOT does participate in the Midwest Intercity Passenger Rail Coalition to support passenger rail in North Dakota. Due to the high costs associated with high-speed rail corridors, projects are not generally economically feasible due to:

- Purchase of right-of-way
- Number of at-grade-crossings
- Separated grade crossings, i.e. bridges spanning creeks and rivers
- Environmental impact
- Lack of ridership

VI. Pedestrians

With moderate pedestrian volumes and low incident rates in the downtown areas of the 12 major cities in North Dakota, pedestrian safety at public crossings have effectively

been addressed. The application of various pedestrian gates and mazes were implemented by six of the major cities with compliant quiet zones. Major cities with established quiet zones include: Fargo, Grand Forks, Minot, Mandan, Bismarck, and Jamestown. The railroad tracks in the remaining major cities circumvent the densely populated downtown business districts.

A low cost and effective safety device for pedestrians and disabled pedestrians at railroad tracks are stop, look, and listen signs.

Amtrak has seven depot stations in North Dakota, located in Fargo, Grand Forks, Devils Lake, Rugby, Minot, Stanley, and Williston. All depots are situated so pedestrians/riders are not required to cross the tracks to board the train from the depot platform.

VII. Innovative Technologies at Grade Crossings

To date, the most innovative project completed was a signal upgrade on an antiquated system that included the installation of preempted flashing LED advance warning signs. The crossing project was initiated by train crews and NDDOT personnel observations at the crossing. The single mainline crossing is in a valley, where both approaches are downhill to the crossing and was experiencing increases in oil traffic with heavy semi-trucks carrying hazardous material. The crossing is located on US-52 north of Kenmare, North Dakota. Below are the specifics related to the project:

Project Number:	SHE-RPS-4-052(077)040	PCN:	20290
90% Federal Cost:	\$230,503.50		
10% State Cost:	<u>\$ 25,611.50</u>		
Total Cost:	\$256,115.00		

VII. Determining High Priority Crossings

High risk highway-rail crossing locations are identified on an annual basis for office review and field diagnostics. NDDOT's annual process is shown in the Highway-Rail Program Prioritization Process Flowchart in Appendix B.

According to the Highway-Rail Program Prioritization Process (Appendix B), the NDDOT Highway-Rail Crossing Safety Manager prepares a program spreadsheet from recently received crossing concerns from the annual solicitation letter submitted by the 3 MPOs and 10 other agencies throughout the State. Once a pool of candidates is identified requiring potential active warning devices, all individual crossings are entered into both the FRA Crash Predictor and the NDDOT Protective Devices Calculator, where they receive a "crossing risk value". The FRA Crash Predictor addresses these risk factors: 5-year crash history, train volumes and speeds per day, total number of tracks, Annual Average Daily Traffic (vehicles), type of warning device, total roadway lanes, and roadway surface type (paved or unpaved). Additional risk factors, such as sight distance, roadway geometry and others, are discussed on site per the NDDOT Protective Devices Calculator (Appendix C). The September 2020 program spreadsheets may be viewed in Appendix D with related refined rankings in Appendix E.

All newly created crossing risk values on the program spreadsheet are compared and ranked with the previously calculated crossings. If a crossing's risk value is elevated over the defined threshold, the appropriate diagnostic team is contacted, and a field investigation is scheduled. The NDDOT manager will schedule the field investigation at each crossing identified and the team will make a collaborative determination of the safety measure(s) to be implemented. Details identified on site are used to update the Grade Crossing Inventory System. Field notes and the suggested safety measure(s) are shared with the Team to ensure all members agree. The field notes must be approved by the diagnostic team.

When a safety measure is identified and all agree, the NDDOT manager initiates the project by requesting cost estimates from the operating railroad. The cost estimates are shared with the diagnostic team, and the road authority/LPA is given notice of the 10% local match requirement. The NDDOT manager requests obligation of Section 130 Program funds and authorization from FHWA.

Railroad and LPA contracts are prepared from cost estimates received. The operating railroad gives notice of the start and the completion of the project. The NDDOT manager conducts a final inspection for compliance. This process can be found in Appendix B, which displays a process flowchart.

A total of 203 crossing projects received Section 130 Program funding for safety upgrades between 2016 through 2020 in North Dakota. Of those 203 crossings, the two operating Class I Railroads received safety projects on 130 crossings. The four operating Regional/Shortline Railroads in the State received 61 crossing safety upgrades. In addition, there were 12 crossing safety projects conducted on public grade crossings over elevator and industrial facility owned track.

VIII. Strategies

The NDDOT uses the following strategies to address safety concerns at rail crossings statewide:

- Identify crossing issues and concerns from local and regional stakeholders through annual solicitation process. Conduct diagnostic reviews of highest-ranking crossings;
 - Timeline: Annually
- Identify opportunities to close high-risk/low-volume crossings in coordination with Railroads and other stakeholders and offer incentive funding through the Section 130 Program; Timeline: Annually.
- Prioritize replacement of antiquated signal systems (25+ years since installation);
 - Timeline: 5 years
- Update NDDOT grade crossing safety programs to incorporate changes from new legislation;
 - Timeline: 2 years.

Following are items NDDOT will consider as we update our programs and incorporate changes/modifications from passage of the Infrastructure Investment and Jobs Act of 2021

- Incentive funding for grade crossing closures can now be \$100,000 (up from \$7,500)
- Federal share of crossing projects can now be 100% instead of 90%.
- 8% of Section 130 Program can be spent on data collection, up from 2%.
- The FRA will also have a blocked crossing portal to monitor complaints about blocked crossings.
- The current accident prediction model used in the FRA Accident Prediction System is anticipated to be replaced.

IX. Additional Responsibilities

The North Dakota Department of Transportation's Point of Contact for implementation of the ND Highway-Rail Grade Crossing State Action Plan and related strategies:

Mr. James D. Styron, Highway-Rail Crossing Safety Manager
Planning/Asset Management Division
North Dakota Department of Transportation
608 E. Boulevard Avenue
Bismarck, ND 58505-0700
Phone: 701-328-4409
Email: jstyron@nd.gov

The NDDOT Planning/Rail Section is also responsible for:

- Preparing responses to inquiries on highway-rail crossing signals, surfaces, crossing closures, rail activities and help coordinate highway construction projects where railroad crossings are involved.
- Conducting analysis of public at-grade rail crossings and developing a prioritized listing of signal and surface projects. This process includes facilitating consensus between the diagnostic team, that consists of the operating railroad, local road authority and the NDDOT on how to address safety concerns.
- Assisting with the development of local road authority sponsorship of all public at-grade crossing projects statewide. This can entail preparing urban/county agreements.
- Maintaining statewide railroad crossing inventory data through FRA Grade Crossing Inventory System and coordinating the rail GIS layer on NDDOT's website using Roadway Information Management System (RIMS) Viewer.

Appendix A – 49 CFR Part 234, Subpart B § 234.11

49 CFR Part 234, Grade Crossing Safety

§ 234.11 State highway-rail grade crossing action plans

(a) Purpose. The purpose of this section is to reduce accident/incidents at highway-rail and pathway grade crossings nationwide by requiring States and the District of Columbia to develop or update highway-rail grade crossing action plans and implement them. This section does not restrict any other entity from adopting a highway-rail grade crossing action plan. This section also does not restrict any State or the District of Columbia from adopting a highway rail grade crossing action plan with additional or more stringent requirements not inconsistent with this section.

(b) New Action Plans.

(1) Except for the 10 States identified in paragraph (c)(3) of this section, each State and the District of Columbia shall develop a State highway-rail grade crossing action plan that addresses each of the required elements listed in paragraph (e) of this section and submit such plan to FRA for review and approval not later than February 14, 2022.

(2) Each State and the District of Columbia shall submit its highway-rail grade crossing action plan electronically through FRA’s website in Portable Document Format (PDF).

(c) Updated Action Plan and implementation report.

(1) Each of the 10 States listed in paragraph (c)(3) of this section shall develop and submit to FRA for review and approval an updated State highway-rail grade crossing action plan that addresses each of the required elements listed in paragraph (e) of this section, not later than February 14, 2022.

(2) Each of the 10 States listed in paragraph (c)(3) of this section shall also develop and submit to FRA, not later than February 14, 2022, a report describing:

(i) How the State implemented the State highway-rail grade crossing action plan that it previously submitted to FRA for review and approval; and

(ii) How the State will continue to reduce highway-rail and pathway grade crossing safety risks.

(3) The requirements of this paragraph (c) apply to the following States: Alabama, California, Florida, Georgia, Illinois, Indiana, Iowa, Louisiana, Ohio, and Texas.

(d) *Electronic submission of updated Action Plan and implementation report.* Each of the 10 States listed in paragraph (d)(2) of this section shall submit its updated highway-rail grade crossing action plan and implementation report electronically through FRA’s website in PDF form.

(e) *Required elements for State highway-rail grade crossing action plans.* Each State highway-rail grade crossing action plan described in paragraphs (b) and (c) of this section

shall:

(1) Identify highway-rail and pathway grade crossings that:

- (i) Have experienced at least one accident/incident within the previous 3 years;
- (ii) Have experienced more than one accident/incident within the previous 5 years; or
- (iii) Are at high-risk for accidents/incidents as defined in the Action Plan. Each State or the District of Columbia that identifies highway-rail and pathway grade crossings that are at high-risk for accidents/incidents in its Action Plan shall provide a list of the factors that were considered when making this determination. At a minimum, these factors shall include:
 - (A) Average annual daily traffic;
 - (B) Total number of trains per day that travel through each crossing;
 - (C) Total number of motor vehicle collisions at each crossing during the previous 5-year period;
 - (D) Number of main tracks at each crossing;
 - (E) Number of roadway lanes at each crossing;
 - (F) Sight distance (stopping, corner and clearing) at each crossing;
 - (G) Roadway geometry (vertical and horizontal) at each crossing; and
 - (H) Maximum timetable speed;

(2) Identify data sources used to categorize the highway-rail and pathway grade crossings in paragraph (e)(1) of this section;

(3) Discuss specific strategies, including highway-rail grade crossing closures or grade separations, to improve safety at those crossings over a period of at least four years;

(4) Provide an implementation timeline for the strategies discussed in paragraph (e)(3) of this section; and

(5) Designate an official responsible for managing implementation of the State highway-rail grade crossing action plan.

(f) Point of contact for State highway/rail grade crossing action plans.

(1) When the State or the District of Columbia submits its highway-rail grade crossing action plan or updated Action Plan and implementation report electronically through FRA's website, the following information shall be provided to FRA for the designated official described in paragraph (e)(5) of this section:

- (i) The name and title of the designated official;

(ii) The business mailing address for the designated official;

(iii) The email address for the designated official; and

(iv) The daytime business telephone number for the designated official.

(2) If the State or the District of Columbia designates another official to assume the responsibilities described in paragraph (e)(5) of this section before December 16, 2024, the State or the District of Columbia shall contact FRA and provide the information listed in paragraph (f)(1) of this section for the new designated official.

(g) Review and approval.

(1) FRA will update its website to reflect receipt of each new, updated, or corrected highway-rail grade crossing action plan submitted pursuant to this section.

(2)

(i) Within 60 days of receipt of each new, updated, or corrected highway-rail grade crossing action plan, FRA will conduct a preliminary review of the Action Plan to ascertain whether the elements prescribed in paragraph (e) of this section are adequately addressed in the plan.

(ii) Each new, updated, or corrected State highway-rail grade crossing action plan shall be considered conditionally approved for purposes of this section sixty (60) days after receipt by FRA unless FRA notifies the designated official described in paragraph (e)(5) of this section that the highway-rail grade crossing action plan is incomplete or deficient.

(iii) FRA reserves the right to conduct a more comprehensive review of each new, updated, or corrected State highway-rail grade crossing action plan within 120 days of receipt.

(3) If FRA determines that the new, updated, or corrected highway-rail grade crossing action plan is incomplete or deficient:

(i) FRA will provide email notification to the designated official described in paragraph (e)(5) of this section of the specific areas in which the Action Plan is deficient or incomplete and allow the State or the District of Columbia to complete the plan and correct the deficiencies identified.

(ii) Within 60 days of the date of FRA's email notification identifying the specific areas in which the highway-rail grade crossing action plan is incomplete or deficient, the State or District of Columbia shall correct all deficiencies and submit the corrected State highway-rail grade crossing action plan to FRA for approval. The corrected highway-rail grade crossing action plan shall be submitted electronically through FRA's website in PDF format.

(4)

(i) When a new, updated, or corrected State highway-rail grade crossing action plan

is fully approved, FRA will provide email notification to the designated official described in paragraph (e)(5) of this section.

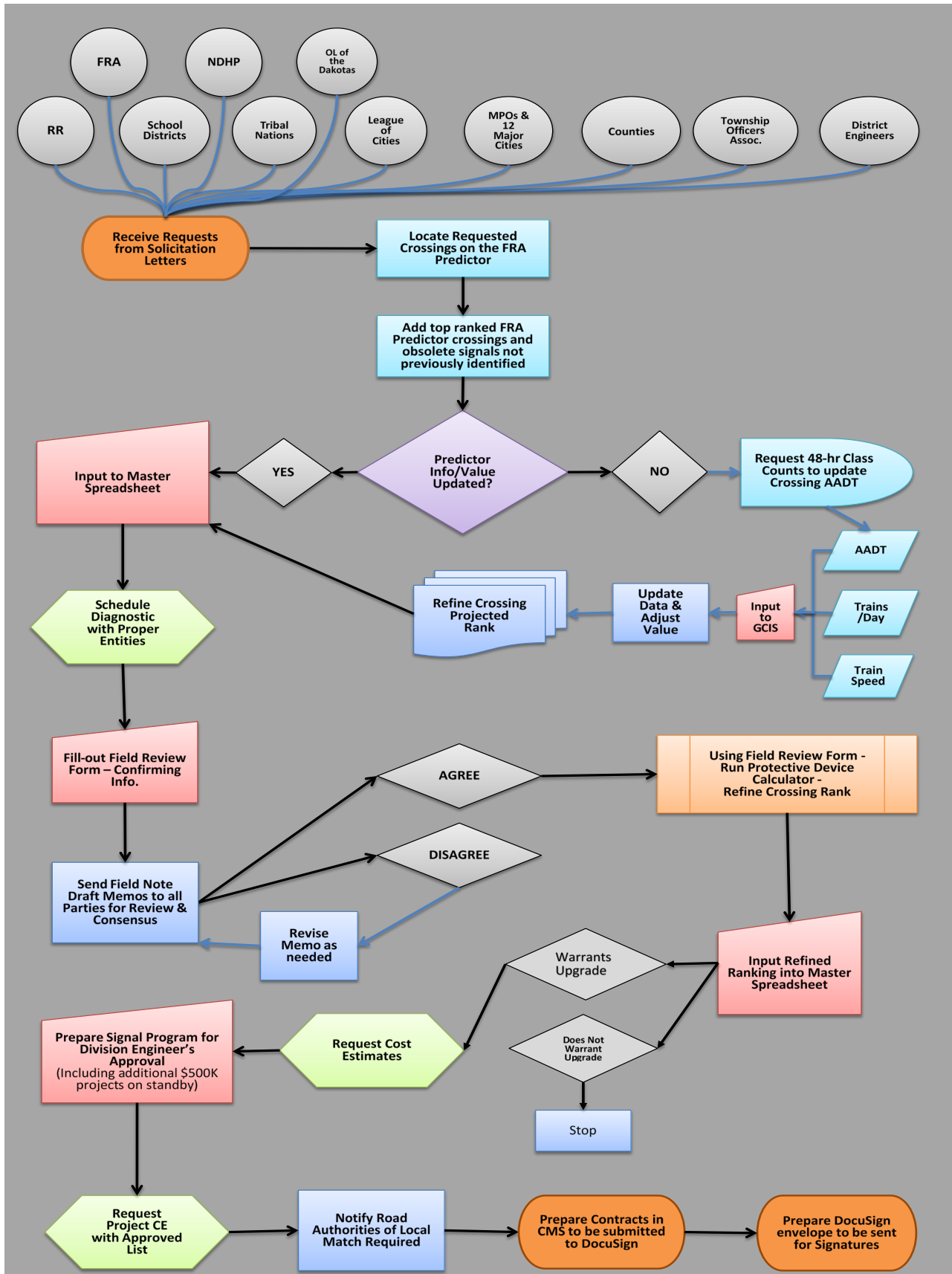
(ii) FRA will make each fully approved State highway-rail grade crossing action plan publicly available for online viewing.

(iii) Each State and the District of Columbia shall implement its fully approved highway-rail grade crossing action plan.

(h) *Condition for grants.* The Secretary of Transportation may condition the awarding of any grants under 49 U.S.C. Ch. 244 on the State's or District of Columbia's submission of an FRA approved State highway-rail grade crossing action plan under this section are adequately addressed in the plan.

[[85 FR 80659](#), Dec. 14, 2020; [86 FR 10857](#), Feb. 23, 2021]

Appendix B - Highway-Rail Program Prioritization Process Flowchart



Appendix C – Protective Devices Calculator

PROTECTIVE DEVICES CALCULATOR

1	FRA Prediction Data As Of:		23 USC §409 Documents NDDOT Reserves All Objections		
2	DOT #				Points
3	Crash Prediction Value				0
4	Was a recommendation/observation documented by the railroad company or FRA Crash Predictor?		(Y/N)		
5	Was a recommendation/observation documented from a City, County, School District Official or NDDOT District?		(Y/N)		
6	Was a recommendation/observation documented from a member of the public?		(Y/N)		
7	How many School buses cross this crossing per day?		# of buses/day		0
8	Proximity to Schools?		1 mile		
			1/2 mile		
			1/4 mile		
9	Hazardous Material Trucks or on a Hazardous Truck Route?		(Y/N)		
10	Does Amtrak use this Crossing?		(Y/N)		
11	Is this crossing located within a mile from an Urban Development, or Densely Populated Area? (>750 population)		(Y/N)		
12	Highway Speed (Enter an "X" in the Appropriate Box):		45 MPH:		
			55 MPH:		
			65 MPH:		
13	How many Quadrants in the Crossing have Visual Obstructions? (Enter an "X" in the Appropriate Quadrant Box):		1 Quad		
			2 Quad		
			3 Quad		
			4 Quad		
14	Including both track and roadway, how many vertical curves exist near the crossing?		(0-4 max)		0
15	Skew Angle at crossing (greater the angle from 90 degrees, the greater the risk) (Enter an "X" in the Appropriate Box):		0 - 29		
			30 - 59		
16	Is the crossing in close proximity to an intersection? If so - what type? Consider 750+ AADT on intersecting roadway as High Volume Consider 55+ MPH on intersecting roadway as High Speed (Enter an "X" in the Appropriate Box for both Volume & Speed)		Hi-Volume		
			Low-Volume		
			Hi-Speed		
			Low-Speed		
17	Identify and weight the discussed items of concern by the team:		Weight (1 to 30)		0
			CROSSING RISK VALUE		0

Appendix D – September 2020 Program Spreadsheets

RPS-9999(435) 2020 SIGNAL PROGRAM PCN 22652 - PE auth. 9/12/2019 - CE auth. 5/04/2020 - End Date 5/04/2023

ACTV. NO.	DOT NO.	MP	NO. TRACKS	RR ID	CITY/COUNTY	Roadway ID/ Functional Class	SEC. 130 PARTIC.	ACTUAL RR COST ESTIMATE	LPA - Split	NEW INSTALL/ UPGRADE	RR/NDDOT Contract Number
401	092939W	46.09	3	NPR	Mohall/Renville	ND 5/Princ Art R	\$ 172,830.43	\$ 191,811.59	State 90/10	Upgrade	17191483
402	690399D	241.21	1	DMVW	Forman/Sargent	ND 32/Minor Art R	\$ 194,164.46	\$ 215,738.29	State 90/10	Upgrade	17191562
403	690531Y	313.42	1	DMVW	Kulm/Lamoure	ND 13/Princ Art R	\$ 190,675.16	\$ 211,881.29	State 90/10	Upgrade	17191563
404	916572J	43.30	1	DMVW	Geneseo/Sargent	ND 11/Minor Art R	\$ 192,208.42	\$ 213,564.91	State 90/10	Upgrade	17191564
405	103387T	128.88	1	RRVW	W. Gwinner/Sargent	ND 13/Minor Art R	\$ 148,291.80	\$ 164,768.44	State 90/10	Upgrade	17191504
406	103485J	86.27	1	RRVW	LaMoure/LaMoure	ND 13/Princ Art R	\$ 136,389.80	\$ 151,544.00	State 90/10	Upgrade	17191507
407	093132R	66.80	1	BNSF	Kamak/Griggs	CR 19/Major Coll R	\$ 92,222.00	\$ 184,444.00	N/A - 50/50	Upgrade	17191567
408	093150N	73.83	2	BNSF	Hannaford/Griggs	CR 26/Major Coll R	\$ 107,353.00	\$ 214,708.00	N/A - 50/50	Upgrade	17191568
409	093208U	8.076	2	BNSF	Bowbells/Burke	ND 8/Minor Art R	\$ 118,168.00	\$ 236,336.00	N/A - 50/50	Upgrade	17191569
410	394029K	951.12	1	BNSF	Gascoyne/Bowman	Main St/ Local R	\$ 91,168.00	\$ 182,336.00	N/A - 50/50	Upgrade	17191570
411	394058V	982.42	1	BNSF	NW Rhame/Bowman	CMC 0819/Major Coll R	\$ 92,209.50	\$ 184,419.00	N/A - 50/50	Upgrade	17191571
412	062513U	6.89	1	BNSF	N Grand Forks/Grand Forks	CR 11/Major Coll R	\$ 91,067.50	\$ 182,135.00	N/A - 50/50	Upgrade	17200106
413	062526V	19.29	1	BNSF	7m NW of Manvel/Grand Forks	CR 1/Major Coll R	\$ 92,042.00	\$ 184,084.00	N/A - 50/50	Upgrade	17200107
414	081918X	144.48	1	BNSF	Grafton/Walsh	ND 17/Princ Art R	\$ 124,273.00	\$ 248,546.00	N/A - 50/50	Upgrade	17200135
415	062506J	2.11	1	BNSF	Grand Forks/Grand Forks	27th Ave N/Minor Art U	\$ 97,129.00	\$ 194,258.00	N/A - 50/50	Upgrade	17200136
416	103030D	53.48	3	BNSF	Finley/Steele	Steele CR 18/Maj Coll R	\$ 102,952.50	\$ 205,905.00	N/A - 50/50	Upgrade	17200248
417	060892F	64.98	2	BNSF	East Fairview/Mckenzie	2nd St/Local R	\$ 104,326.50	\$ 208,653.00	N/A - 50/50	Upgrade	17200249
418	103055Y	87.25	1	BNSF	Aneta/Nelson	ND 32/Minor Art R	\$ 91,301.00	\$ 182,602.00	N/A - 50/50	Upgrade	17200663
419	087684S	198.290	1	BNSF	Mandan/Morton	Welk Steel Crossing/Local U	\$ 100,622.00	\$ 201,244.00	N/A - 50/50	Upgrade	17200673
420	103042X	59.98	1	BNSF	Sharon/Griggs	ND 32/Minor Art R	\$ 117,261.00	\$ 234,522.00	N/A - 50/50	Upgrade	17200725
						PE	\$ 11,025.00	\$ 12,250.00			
						CE	\$ 13,950.00	\$ 15,500.00			
ESTIMATED TOTALS							\$ 2,481,429.67	\$ 4,021,228.52			
Federal Target							\$ 2,350,000.00				
(over)/under target							\$ (131,429.67)				

APPROVED BY: Scott Zainhofsky
TITLE: P/AM DIVISION ENGINEER

DATE: 07/01/2020 - signed electronically; see 07/01/2020 email @14:55

PREPARED BY: North Dakota Department of Transportation
P-AM Division, Planning/Rail Section

23 USC §409 Documents
NDDOT Reserves All Objections

Hazard Elimination	\$ 2,400,593.54	Federal	\$ 2,350,000.00 Target
Signal Program	\$ 2,481,429.67	Federal	\$ 2,350,000.00 Target
Total	\$ 4,882,023.21	Federal	
Total Fed. Amount	\$ 4,700,000.00	Federal	(\$5.2m total)
Total Obligation	\$ (182,023.21)	(over)under	

Richland County rejected the 10% local match - remove crossings from the pool of candidates for 2020 program - RRVW was notified 1/9/2020

062672B	17.24	1	RRVW	Pitcairn/Richland	Richland CR 8/Local R
062638U	3.17	1	RRVW	Walhpeton/Richland	Richland CR 10/Local R

**HAZARD ELIMINATION FY 2020 FUNDS
FOR 2020 CONSTRUCTION**

DOT NO.	RR MP	RR ID.	# TRKS/ LENGTH	City/County	ROADWAY/FUNCT. CLASS	SEC. 130 PARTIC.	RR COST ESTIMATE	Req. Autho Memo	PROJECT NUMBER	PCN
690571W	341.05	DMVW	4/48-FT	Wishek/McIntosh	Centennial St/Maj Coll R	\$ 182,196.78	\$ 202,440.87	10/18/2019	RSC-2615(003)	22675
082166E	23.84	DNRR	2/32-FT	Hensel/Pembina	CR 3/Maj Coll R	\$ 85,950.45	\$ 95,500.50	11/13/2019	RSC-3424(003)	22712
082208N	41.71	DNRR	1/65-FT	Leyden/Pembina	CR 1/Maj Coll R	\$ 79,876.35	\$ 88,751.50	11/13/2019	RSC-3410(004)	22713
696262E	364.64	NPR	3/40-FT	Ardoch/Walsh	US 81/Princ Art R	\$ 194,467.98	\$ 216,075.53	3/4/2020	RSN-6-081(107)175	22833
092939W	46.09	NPR	3/40-FT	Mohall/Renville	ND 5/Princ Art R	\$ 191,630.03	\$ 212,922.25	3/4/2020	RSN-4-005(040)125	22834
092843G	174.260	ELEV	1/56-FT	Beach/Golden Valley	N Central Ave/Maj Coll R	\$ 147,229.89	\$ 163,588.77	1/10/2020	RSC-1703(001)	22778
060461X	174.121	ELEV	1/56-FT		2nd Ave NE/Local R	\$ 118,975.73	\$ 132,195.25				10/1/2019	RSC-0731(020)	22671
693350E	523.64	CPRS	1/54-FT	Van Hook/Mountrail	83rd Ave/Local R	\$ 85,510.13	\$ 95,011.25	4/30/2020	RSO-C731(022)	22894
976078R										
102435C	225.313	BNSF	1/88-FT	Surrey/Ward	SRTS s-walk surf./Maj Coll R	\$ 52,991.10	\$ 58,879.00	10/18/2019	RSC-5142(002)	22677
081749M	44.525	BNSF	1/32-FT	Gardner/Cass	CR 26/Maj Coll R	\$ 27,200.00	\$ 84,852.00	10/18/2019	RSC-0910(003)	22676
093201W	4.969	BNSF	1/40-FT	Bowbells/Burke	CR 17/Maj Coll R	\$ 54,400.00	\$ 97,879.00	2/11/2020	RSC-0731(021)	22809
093458G	124.587	BNSF	4/60-FT	New Rockford/Eddy	CR 9/Maj Coll R	\$ 136,000.00	\$ 244,185.00	2/11/2020	RSC-1412(001)	22810
102469W	20.986	BNSF	2/104-FT	Willow City/Bottineau	CR 28A/Maj Coll R	\$ 176,800.00	\$ 262,184.00	2/11/2020	RSC-0528(006)	22811
081914V	144.975	BNSF	2/64-FT	Grafton/Walsh	6th Street/Local R	\$ 108,800.00	\$ 180,756.00	2/11/2020	RSO-C650(003)	22812
086599Y	44.392	BNSF	2/32-FT	Petersburg/Nelson	CR 5/Maj Coll U	\$ 54,400.00	\$ 121,059.00	2/11/2020	RSC-3225(005)	22813
093035G	41.788	BNSF	2/48-FT	Page/Cass	ND 38/Maj Coll R	\$ 81,600.00	\$ 161,451.00	2/11/2020	RS5-8-038(005)018	22814
093453X	124.112	BNSF	1/32-FT	New Rockford/Eddy	8th Street S/Maj Coll R	\$ 27,200.00	\$ 67,205.00	3/25/2020	RSC-1407(002)	22854
093505M	131.265	BNSF	1/32-FT	Munster/Eddy	CR 12/Maj Coll R	\$ 27,200.00	\$ 65,509.00	3/25/2020	RSC-1401(003)	22855
081388K	33.838	BNSF	1/32-FT	Harwood/Cass	CR 32/Maj Coll R	\$ 27,200.00	\$ 67,388.00	3/25/2020	RSC-0922(004)	22856
086679S	84.582	BNSF	1/40-FT	Devils Lake/Ramsey	12th Ave S/Minor Art U	\$ 40,800.00	\$ 87,649.00	3/26/2020	RSO-C336(001)	22857
062335U	24.781	BNSF	1/64-FT	Ardoch/Walsh	US 81/Princ Art R	\$ 54,400.00	\$ 97,879.00	3/26/2020	RSN-6-081(108)175	22859
071715L	40.980	BNSF	1/96-FT	Coteau/Burke	ND 8/Minor Art R	\$ -	\$ -	5/18/2020	RSN-7-008(036)190	22918
071656R	1.05	BNSF	Signal Reloc	Berthold/Ward	US 2/Princ. Art R	\$ 114,082.20	\$ 126,758.00	9/4/2020	RSN-7-002(177)121	23018
071929H	2.931	BNSF	Closure	Harrison Township/Minot	33rd St SW/Local R	\$ 7,500.00	\$ 49,358.75	8/21/2020	RSO-0051(007)	23006
087866D	47.71	LELAND	1/80-FT	Leland Olds/Mercer	ND 200A/Princ Art R	\$ 107,537.49	\$ 119,486.10	6/3/2020	RSN-1-200(080)908	22930
082157F	17.79	DNRR	3 trks 0 | 0	Crystal/Pembina	ND 66/Maj. Coll R	\$ 75,807.00	\$ 84,230.00	7/13/2020	RSN-6-066(029)112	22977
082563X	39.37	DNRR	3 trks 0 | 0	Grafton/Walsh	E. 8th St./Local R	\$ 40,509.90	\$ 45,011.00	7/21/2020	RSO-C650(004)	22994
System	et.al.	Program	Study	Statewide	2% Rail Study	\$ 45,000.00	\$ 50,000.00	10/1/2019	RRT-CY-20(032)	22649
ESTIMATED TOTALS						\$ 2,345,265.02	\$ 3,278,204.77			


\$850/LF BNSF surfaces

Federal Target \$ 2,350,000.00
-over/under target \$ 4,734.98

WITH LPA PROJECTS

The advance warning beacon project was rejected by the DMVW Railroad - DOT 087739 Moffit, ND
 Included CPRS new surface relocation per Township roadway improvement project Van Hook. Project includes new signals from the 2019 Program.
 5/18/2020 - Included BNSF 071751L Coteau surface - moved Ayr rehab to 2021
 7/1/2020 - include DNRR signal upgrade.
 9/30/2020 - Coteau was withdrawn upon request of BNSF

23 USC §409 Documents
 NDDOT Reserves All Objections

APPROVED BY: 
 TITLE: P/AM DIVISION ENGINEER
 DATE: 10/08/2020

PREPARED BY: North Dakota Department of Transportation
 P-AM Division, Planning/Rail Section

Appendix E - Annually Refined Ranking Spreadsheets by Program

MASTER SIGNAL REFINED RANKING - December 2021

NDDOT VALUE	FRA RANK	Prev. Rank	DOT NO.	RR ID.	CITY/COUNTY	STREET NAME	ESTIMATED PROJECT COST
285.777	25	261	0933295	BSGF	SE White Earth/Mounttrail	66th St NW	\$500,000.00
221.597	49	55	061287Y	BSGF	Grand Forks/Grand Forks	University Ave	\$250,000.00
200.322	2538	429	103487X	RRVW	LaMoure/LaMoure	CMC 2335/1st Ave NE	\$150,000.00
180.178	2789	2859	103493B	RRVW	NW LaMoure/LaMoure	CR 63	\$150,000.00
165.178	2818	2942	086906U	BSGF	NW Edinburg/Walsh	CR 7	\$250,000.00
154.339	60	1057	093485D	BSGF	York/Benson	47th Ave NE	\$250,000.00
139.538	1246	1259	062730U	RRVW	S. of Durdin	42nd St	\$130,000.00
138.975	61	963	086844A	BSGF	S Thompson/Grand Forks	5th Ave NE	\$400,000.00
136.864	774	781	067273L	NPR	MUNICH/CAVALIER	ND 20	\$150,000.00
132.731	66	69	690539D	DMVW	FREDONIA/LOGAN	ND 56	\$150,000.00
131.573	811	583	698037U	NPR	Southern/Ramsey	CR4	\$175,000.00
130.892	308	307	945780N	DMVW	Bismarck/Burlingame	Morrison Ave	\$150,000.00
130.664	325	323	071152R	BSGF	Tower City/Cass	134th Ave SE	\$250,000.00
130.010	1268	1281	103455S	RRVW	Englewood/Ransom	CR 58	\$137,933.88
128.414	510	1161	693422F	DMVW	Underwood/McLean	CR 14	\$150,000.00
127.732	1557	1562	062514B	BSGF	Manvel/Grand Forks	16TH ST NE	\$300,000.00
126.678	48	49	086658Y	BSGF	S Crang/Ramsey	89th Ave NE	\$300,000.00
124.233	430	727	693423M	DMVW	Underwood/McLean	Lincoln Ave	\$150,000.00
120.656	327	325	071934E	BSGF	Des Lacs/Ward	128th St NW	\$500,000.00
118.865	452	451	093378N	BSGF	Epping/Williams	126th Ave NW	\$300,000.00
118.648	1405	1416	394064Y	BSGF	Marmarth/Slope	Main St	\$400,000.00
114.235	429	428	699054C	CPRS	Porta/Burke	CR 2	\$300,000.00
110.510	25	261	0933295	BSGF	E White Earth/Mounttrail	66th St. NW	\$300,000.00
110.322	2562	2596	699077V	DMVW	AMBROSE/DIVIDE	ND 42	\$150,000.00
110.287	2618	2677	067408K	DMVW	Cayuga/Sargent	CR 12	\$175,000.00
108.824	39	46	691820D	CPRS	Mantador/Wichard	Lorraine St	\$250,000.00
106.799	779	785	690526C	DMVW	KULM/LAMOURE	ND 56	\$150,000.00
105.682	1270	1283	696589T	BSGF	Niagara/Grand Forks	CR 9	\$400,000.00
105.287	2638	2666	067400F	DMVW	Garrison/Sargent	CR 14	\$175,000.00
105.287	2869	2879	102637A	BSGF	CHURCH FERRY/RAMSEY	US 281	\$300,000.00
105.158	2966	3246	071068M	BSGF	N Erie/Cass	CR 5	\$300,000.00
103.650	1404	1413	693179T	CPRS	Kongberg/McHenry	CMC-2513	\$300,000.00
103.255	1492	1505	070987A	RRVW	S. Butte/Ransom	CR 135	\$150,000.00
102.679	798	803	698790Q	CPRS	E Henry/Wells	23rd Street NE	\$400,000.00
102.482	857	844	081780Y	BSGF	Hillsboro/Trail	1/2 St. NE	\$400,000.00
100.844	988	998	093201W	BSGF	S Bowbells/Burke	CR 17	\$300,000.00
100.290	2584	2660	081842U	BSGF	JOLIETTE/PEMBINA	ND 5	\$250,000.00
100.287	2640	2645	067416C	DMVW	Butland/Sargent	CR 10	\$165,000.00
100.158	2442	3046	067417J	DMVW	Butland/Sargent	CR 3	\$165,000.00
98.366	516	512	093133X	BSGF	E Hannaford/Griggs	9th St SE	\$400,000.00
96.187	290	292	071775A	DMVW	LIGNITE/WARD	ND 89	\$150,000.00
95.452	1069	935	082194H	DMRR	Beckton/Pembina	CR 12	\$25,000.00
95.158	3157	3162	067424U	DMVW	NE Havana/Sargent	CR 5	\$175,000.00
94.373	1291	1305	060426U	BSGF	W South Hears/Stark	122nd Ave SW	\$400,000.00
93.789	1390	1405	693317E	CPRS	W Parshall/Mounttrail	73rd Ave NW	\$250,000.00
89.792	379	309	093137A	BSGF	E Hannaford/Griggs	113th Ave SE	\$400,000.00
88.547	493	489	086847V	BSGF	N. of Reynolds/Grand Forks	CR 22	\$400,000.00
85.287	2621	2681	698012Y	NPR	WHITMAN/NELSON	ND 35	\$150,000.00
85.205	1138	1142	093278U	BSGF	Towner/McHenry	9th Ave NE	\$300,000.00
84.042	1355	1366	693291E	CPRS	W Plaza Switch/Mounttrail	62nd Ave NW	\$230,000.00
83.789	1391	1407	693328S	CPRS	6m W Parshall/Mounttrail	79th Ave NW	\$250,000.00
83.029	558	558	071095E	BSGF	Mapleton/Cass	16th Ave SE	\$300,000.00
82.252	1617	1549	082146T	DMRR	Hoople/Walsh	CR 1	\$150,000.00
81.396	859	866	093098B	BSGF	Surrey/Ward	125TH ST. NE	\$400,000.00
78.299	534	523	102941D	BSGF	NW Casselton/Cass	150th Ave SE	\$400,000.00
77.796	596	595	093553L	BSGF	Verendrye, McHenry	7th Ave North	\$300,000.00
75.868	986	996	086856U	BSGF	S. of Reynolds/Trail	16th St NE	\$400,000.00
75.287	2632	2667	103089T	BSGF	Peikin/Nelson	ND 1	\$250,000.00
75.287	2624	654	698637W	NPR	Kramer/Bottineau	CR 20	\$150,000.00
71.040	933	944	087288B	NPR	MUNICH/CAVALIER	ND 66	\$150,000.00
68.892	1379	1391	394063S	BSGF	Marmarth/Slope	76th St. SW	\$400,000.00
66.417	854	861	087720K	BSGF	Golf Course/Kidder	22nd Ave SE	\$400,000.00
66.204	900	901	093642U	BSGF	Karlruhe/McHenry	47th St N	\$300,000.00
65.951	962	641	071788B	DMVW	COLUMBUS/BURKE	ND 40	\$150,000.00
61.025	936	947	087545W	BSGF	W Richardson/Stark	91st Ave SW	\$300,000.00
57.732	1551	1570	693281Y	CPRS	E Plaza Switch/Mounttrail	61st Ave NW	\$230,000.00
56.767	787	794	060430Y	BSGF	W South Hears/Stark	125 1/2 Ave SW	\$400,000.00
56.417	852	862	087705H	BSGF	W. Dewson/Kidder	33rd Ave SE	\$300,000.00
50.178	2389	2785	103007J	BSGF	Hope/Steele	CR 6	\$400,000.00
50.043	1161	1174	087703M	BSGF	Dewson/Kidder	35th Ave SE	\$300,000.00
45.542	333	332	093045M	BSGF	E Page/Cass	CR 1	\$300,000.00
45.199	2683	2685	092962R	BSGF	Fargo/Cass	183rd Ave SE	\$300,000.00
40.287	2637	2653	071061K	BSGF	N Erie/Cass	CR26	\$300,000.00

▲▲ INCREASED RISK from previous year
 ▲ DECREASED RISK from previous year
\$19,502,933.88

PASSIVE PUBLIC AT-GRADE CROSSINGS ON THE STATE HIGHWAY SYSTEM

690539D	DMVW	FREDONIA/LOGAN	ND 56	\$150,000.00
071775A	DMVW	LIGNITE/WARD	ND 89	\$150,000.00
071788B	DMVW	COLUMBUS/BURKE	ND 40	\$150,000.00
081842U	BSGF	JOLIETTE/PEMBINA	ND 5	\$250,000.00
067273L	NPR	MUNICH/CAVALIER	ND 20	\$150,000.00
087288B	NPR	MUNICH/CAVALIER	ND 66	\$150,000.00
102637A	BSGF	CHURCH FERRY/RAMSEY	US 281	\$250,000.00
103089T	BSGF	PEKIN/NELSON	ND 1	\$250,000.00
690526C	DMVW	KULM/LAMOURE	ND 56	\$150,000.00
698012Y	NPR	WHITMAN/NELSON	ND 35	\$150,000.00
699077V	DMVW	AMBROSE/DIVIDE	ND 42	\$150,000.00

OTHER PASSIVE CROSSINGS ON THE STATE SYSTEM

067866D					Bismarck District assisted
090679F			LELAND OLDS PP/MERCER	ND 200A	
071751L			WISHEX/SANTOSON	ND 13	
080897D			COTEAU/BURKE	ND 8	
			WOODWORTH/STUTSMAN	ND 36	

Additional crossing that received Interim safety measures have been moved to SSM Installed tab

23 USC §408 Documents
 NDDOT Reserves All Objections

MASTER SURFACE REFINED RANKING - December 2021

Refined Rank	Exposure Rate	DOT NO.	RR ID.	CITY/COUNTY	STREET NAME	AADT	TPD <1=75	#TRKS	PAVED	LANES	ANGLE	HWY MPH
25,461.50	25,440.00	698937K	CPRS	Burlington/Ward	CR 10/Colton Ave/MC R	2,120.00	12	3	Y	2	90	25
8,271.00	8,250.00	691880M	CPRS	Enderlin/Ransom	Broadway St/Local R	750.00	11	6	Y	2	85	25
5,238.00	5,225.00	691957X	CPRS	Wimbledon/Barnes	3rd Ave S/Local R	475.00	11	3	Y	2	90	25
3,750.00	3,720.00	691864D	CPRS	Anselm/Ransom	CR 54/MC R	310.00	12	1	Y	2	27	55
1,124.50	1,100.00	693323H	CPRS	Parshall/Mountrail	Mountrail CR 3/Local R	275.00	4	1	Y	2	80	55
705.00	690.00	698075D	NPR	Devils Lake/Ramsey	8th Ave NW/MC U	345.00	2	1	Y	2	60	25
619.50	600.00	087717C	BNSF	Steele/Kidder	25th Ave SE/Local R	50.00	12	1	N	2	80	25
467.25	446.25	067416C	DMV&W	Rutland/Sargent	CR 10/MC R	595.00	<1	1	Y	2	78	25
382.50	360.00	699013J	CPRS	SE Flaxton/Burke	CR 15/74th Ave NW/Local R	30.00	12	1	N	2	45	50
353.50	330.00	691958E	CPRS	Wimbledon/Barnes	96th Ave SE/Local R	30.00	11	2	N	2	70	25
296.00	285.00	082026C	NPR	Gilby/Grand Forks	GF CR 33/28th Ave/MC R	380.00	<1	1	Y	2	90	25
279.50	250.00	103405N	RRV&W	Crete/Sargent	CR 2/MC R	125.00	2	1	Y	2	65	45
253.75	221.25	070909T	RRV&W	Horace/Cass	CR 14/46th St SE/MC R	295.00	<1	1	N	2	25	45
224.25	206.25	103076S	BNSF	McVile/Nelson	CR 18/Main St/MC R	275.00	<1	3	N	2	90	25
178.25	168.75	067408K	DMV&W	Cayuga/Sargent	CR 12/MC R	225.00	<1	1	Y	2	85	25
146.00	127.50	092967A	BNSF	Prosper/Cass	CR 22/Local R	170.00	<1	1	Y	2	30	40
137.25	108.75	103007J	BNSF	Hope/Steele	CR 6/Baldwin St/MC R	140.00	<1	2	N	2	55	25
133.50	112.50	067400F	DMV&W	S. Geneseo/Sargent	CR 14/MC R	150.00	<1	1	Y	2	90	25
132.50	100.00	086720G	BNSF	Hatton/Steele	CR 12/Eagle Ave NE/MC R	50.00	2	1	N	2	55	55
106.00	82.50	071047P	BNSF	Amenia/Cass	CR 32/MC R	110.00	<1	2	Y	2	90	25
103.50	60.00	103065E	BNSF	Kloten/Nelson	CR 5/117th Ave NE/MC R	80.00	<1	2	N	2	70	25
101.25	71.25	690492K	DMV&W	MONANGO/DICKEY	CR 3/86th St SE/MC R	95.00	<1	1	N	2	23	55
74.25	56.25	690620R	DMV&W	Kintyre/Emmons	CMC 1529/22nd Ave SE/MC R	75.00	<1	3	Y	2	80	25
71.00	52.50	103090M	BNSF	Pekin/Nelson	CR 16/26th St NE/Local R	70.00	<1	1	N	2	30	35
69.75	56.25	087082B	BNSF	Portland/Trail	4th Street/Local R	75.00	<1	1	Y	2	80	25
67.50	52.50	103074D	BNSF	E. of McVile/Nelson	CR 35/113th Ave NE/MC R	70.00	<1	1	N	2	47	30
56.00	45.00	690625A	DMV&W	Braddock/Emmons	CMC 1523/MC R	60.00	<1	1	Y	2	90	25
53.75	33.75	103056F	BNSF	Aneta/Nelson	CR 20/19th St NE/MC R	45.00	<1	1	N	2	50	55
53.00	37.50	087081U	BNSF	Portland/Trail	7th Street/Local R	50.00	<1	3	Y	2	80	25
38.50	30.00	102995J	BNSF	Colgate/Steele	CR 1/10th St SE/Local R	40.00	<1	1	N	2	50	55

23 USC §409 Documents
NDDOT Reserves All Objections